

Title (en)
Copper(II) oxide containing aluminophosphate glasses

Title (de)
Kupfer (II)-oxidhaltiges Alumophosphatgläser

Title (fr)
Verres d'aluminophosphates contenant de l'oxyde de cuivre(II)

Publication
EP 0779253 B1 19980610 (DE)

Application
EP 96116630 A 19961017

Priority
DE 19546313 A 19951212

Abstract (en)
[origin: DE19546313C1] A novel copper (II) oxide-contg. aluminophosphate glass, with a refractive index of 1.52 - 1.54, good chemical resistance, very good devitrification stability and a high transmission between 350 - 550 nm., has the compsn. (by wt., on oxide basis) 4 - 9 % Al₂O₃, 67 - 75 % P₂O₅, 0.5 - 6 % BaO, 0.1 - 1 % CaO, 0 - 4 % MgO, 0 - 1 % SrO, 0.2 - 1 % ZnO, 1.5 - 5 % Na₂O, 2.5 - 3.5 % K₂O, 0.5 - 5 % Li₂O, 0 - 1 % SiO₂, 1 - 2.5 % B₂O₃, 0.1 - 0.5 % As₂O₃, 0 - 0.3 % Cl<->, 0 - 1.3 % F<->, 0.2 - 0.4 % CeO₂ and 1 - 6 % CuO, the sum (RO) of BaO + CaO + MgO + SrO + ZnO being 3.5 - 7 %; the sum (R₂O) of Na₂O + K₂O + Li₂O being 5 - 13 % and the ratio (Kg) of crystallisers to glass-formers (i.e. (Al₂O₃ + SiO₂ + CeO₂)/(P₂O₅ + B₂O₃)) being 0.06 - 0.125.

IPC 1-7
C03C 3/19; **C03C 3/247**; **C03C 4/08**

IPC 8 full level
G02B 5/20 (2006.01); **C03C 3/068** (2006.01); **C03C 3/17** (2006.01); **C03C 3/19** (2006.01); **C03C 3/247** (2006.01); **C03C 4/08** (2006.01); **C03C 4/20** (2006.01); **G02B 1/00** (2006.01); **G02B 5/22** (2006.01)

CPC (source: EP KR US)
C03C 3/07 (2013.01 - KR); **C03C 3/17** (2013.01 - EP US); **C03C 4/082** (2013.01 - EP US); **C03C 4/085** (2013.01 - EP US); **C03C 4/20** (2013.01 - EP US); **G02B 5/226** (2013.01 - EP US)

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
DE 19546313 C1 19970123; DE 59600273 D1 19980716; EP 0779253 A1 19970618; EP 0779253 B1 19980610; JP 3847396 B2 20061122; JP H09202644 A 19970805; KR 0179319 B1 19990320; KR 970042349 A 19970724; TW 349081 B 19990101; US 5750448 A 19980512

DOCDB simple family (application)
DE 19546313 A 19951212; DE 59600273 T 19961017; EP 96116630 A 19961017; JP 34650296 A 19961211; KR 19960064275 A 19961211; TW 85114996 A 19961205; US 76400996 A 19961211